

CLAIMS

What is claimed is:

1. A handheld computer comprising:

a first segment;

a second segment moveably coupled to the first segment to move between a contracted position and an extended position;

a display assembly provided by the first segment;

a first input mechanism provided by the second segment;

wherein the first input mechanism overlays a portion of the display assembly when the

second segment is in the contracted position, and wherein the first input mechanism is

positioned away from the display assembly so that the portion of the display assembly

is accessible to contact by a user when the second segment is in the extended position.

2. The handheld computer of claim 1, wherein the display assembly

includes a first section having a cross-section comprising a digitizer pad and a

screen, and a second section comprising the digitizer pad without the screen,

and wherein the portion of the display assembly that is overlaid by the first

input mechanism includes the second section.

3. The handheld computer of claim 1, wherein the display assembly

includes an immediate character recognition section configured to immediately

recognize and display assembly a character entry, and wherein the portion of the

display assembly that is overlaid by the first input mechanism includes the

immediate character recognition section.

1 4. The handheld computer of claim 1, wherein an exterior surface of the
2 second segment includes a front panel, a plurality of input mechanisms
3 including the first input mechanism being actuatable by the front panel, and
4 wherein the front panel overlays the portion of the display assembly when the
5 second segment is in the contracted position.

1 5. The handheld computer of claim 1, wherein the first input mechanism
2 includes a multi-directional member.

1 6. The handheld computer of claim 1, further comprising a plurality of
2 input mechanisms including the first input mechanism, and wherein at least one
3 of the plurality of input mechanisms is a button that can be pressed to cause an
4 input to be entered onto the handheld computer.

1 7. The handheld computer of claim 1, further comprising a plurality of
2 input mechanisms including the first input mechanism, and wherein at least one
3 of the plurality of input mechanisms is actuatable by detecting surface contact.

1 8. The handheld computer of claim 1, wherein the first segment includes a
2 first rail, the first rail being positioned on a lateral side of the first segment, and
3 wherein the second segment includes a first connecting member that is engaged
4 to the first rail, the first connecting member slideable along a length of the first
5 rail to enable the second segment to move between the contracted position and
6 the extended position.

1 9. The handheld computer of claim 1, wherein the first segment includes a
2 first rail and a second rail, and wherein the second segment includes a first
3 connecting member and a second connecting member, the first connecting
4 member being engaged to the first rail, the second connecting member being
5 engaged to the second rail, the first connecting member and the second
6 connecting member each being slideable along a length of the respective first
7 rail and second rail to enable the second segment to move between the
8 contracted position and the extended position.

1 10. The handheld computer of claim 9, wherein the first segment comprises
2 a front shell, a midframe, and a bottom shell, and wherein the first rail is formed
3 onto a first surface of the midframe, and wherein the second rail is formed onto
4 a second surface of the midframe.

1 11. The handheld computer of claim 9, wherein the first rail and the second
2 rail extend lengthwise on a back surface of the first segment.

1 12. The handheld computer of claim 11, wherein the second segment
2 includes a back plate that slides adjacent to the back surface of the handheld
3 computer.

1 13. The handheld computer of claim 11, wherein the back plate of the
2 second segment includes the first connecting member that slides within the first
3 rail, and the second connecting member that slides within the second rail.

1 14. The handheld computer of claim 1, wherein the first segment is slideably
2 coupled to the second segment so that the second segment moves in a single
3 direction when moving between the contracted position and the extended
4 position.

1 15. The handheld computer of claim 1, further comprising a midframe
2 coupled to the first segment and the second segment.

1 16. The handheld computer of claim 15, wherein the second segment
2 connects to the midframe to move between the contracted position and the
3 extended position.

1 17. The handheld computer of claim 16, wherein the midframe includes a
2 first rail, and wherein the second segment includes a first connecting member
3 that is engaged to the first rail, the first connecting member moving a distance
4 in the first rail to enable the second segment to move between the contracted
5 position and the extended position.

1 18. The handheld computer of claim 16, wherein the midframe includes a
2 first rail and a second rail, and wherein the second segment includes a first
3 connecting member and a second connecting member, the first connecting
4 member being engaged to the first rail, the second connecting member being
5 engaged to the second rail, the first connecting member and the second
6 connecting member each moving a distance in the respective first rail and

second rail to enable the second segment to move between the contracted position and the extended position.

19. A handheld computer comprising:

a first segment;

a contact-sensitive display assembly accessible on a front surface of the first segment; and

a second segment slideably coupled to the first segment to move between a contracted position and an extended position, the second segment being positioned to overlay and reduce an area of the contact-sensitive display assembly that is accessible to contact when moved from the extended position to the contracted position.

20. The handheld computer of claim 19, wherein the display assembly is contact-sensitive.

21. The handheld computer of claim 20, wherein all of the display assembly is accessible to receive contact as input when the second segment is in the extended position.

22. The handheld computer of claim 20, wherein the display assembly includes an immediate character recognition section configured to immediately recognize and display a character entry, and wherein a portion of the display assembly that is overlaid by the first segment includes the immediate character recognition section.

1 23. The handheld computer of claim 20, wherein the display assembly
2 includes a first section having a cross-section comprising a digitizer pad and a
3 screen, and a second section comprising the digitizer pad without the screen,
4 and wherein a portion of the display assembly that is overlaid by the first
5 housing segment includes the second section.

1 24. The handheld computer of claim 19, further comprising a midframe
2 coupled to the first segment and the second segment.

1 25. The handheld computer of claim 24, wherein the midframe includes a
2 first rail, and wherein the second segment includes a first connecting member
3 that is engaged to the first rail, the first connecting member moving a distance
4 in the first rail to enable the second segment to move between the contracted
5 position and the extended position.

1 26. The handheld computer of claim 24, wherein the midframe includes a
2 first rail and a second rail, and wherein the second segment includes a first
3 connecting member and a second connecting member, the first connecting
4 member being engaged to the first rail, the second connecting member being
5 engaged to the second rail, the first connecting member and the second
6 connecting member each moving a distance in the respective first rail and
7 second rail to enable the second segment to move between the contracted
8 position and the extended position.

1 27. A housing assembly for a handheld computer, the housing comprising:
2 a first housing segment having a front surface, the front surface including an opening to
3 provide access to a display surface for the handheld computer;
4 a second housing segment moveably coupled to the first housing segment to move between a
5 contracted position and an extended position, the second housing segment overlaying
6 a first region of the opening of the first housing segment when in the contracted
7 position, the first region of the opening that is overlaid by the second housing
8 segment being reduced as the second housing segment is moved from the contracted
9 position towards the extended position.

1 28. The housing assembly of claim 27, wherein none of the first area is overlaid by the
2 second housing segment when the second housing segment is in the extended position.

1 29. The housing assembly of claim 27, wherein,
2 the first housing segment provides a top housing for the handheld computer, the top housing
3 having a reduced section provided towards a bottom of the top housing,
4 the second housing segment provides a bottom housing for the handheld computer,
5 the bottom housing being configured to overlay at least a majority of the reduced section of
6 the top housing when in the contracted position, and
7 the bottom housing being configured to at least not overlay the majority of the reduced
8 section when in the extended position.

1 30. The housing assembly of claim 29, wherein the second housing segment includes a
2 back plate that extends from the bottom housing to slide along a back surface of the first
3 housing segment when the second housing segment is moved between the contracted position
4 and the extended position.

1 31. The housing assembly of claim 27, wherein the first housing segment comprises a top
2 shell, a midframe, and a bottom shell.

1 32. The housing assembly of claim 31, wherein the midframe has a first rail on a first
2 lateral side of the midframe, and a second rail on a second lateral side of the midframe.

1 33. The housing assembly of claim 31, wherein the second housing segment includes a
2 bottom housing and a back plate, the bottom housing being shaped to abut a top housing of
3 the first housing segment when the second housing segment is moved into the contracted
4 position, the back plate being positioned to slide along a back surface of the first housing
5 segment when the second housing segment is moved between the contracted position and the
6 extended position.

1 34. The housing assembly of claim 33, wherein an interior surface of the housing
2 includes a first connecting member and a second connecting member, the first connecting
3 member and the second connecting member being slideably engaged with the first rail and
4 the second rail.

1 35. The housing assembly of claim 32, wherein a back surface of the first housing
2 segment includes a first rail and a second rail, the back surface opposing the front surface.

1 36. The housing assembly of claim 35, wherein the second housing segment includes a
2 bottom housing and a back plate, the bottom housing being shaped to abut a top housing of
3 the first housing segment when the second housing segment is moved into the contracted
4 position, the back plate being positioned to slide along a back surface of the first housing
5 segment when the second housing segment is moved between the contracted position and the
6 extended position.

1 37. The housing assembly of claim 36, wherein the back plate is dimensioned to slide
2 between the first rail and the second rail on the back surface of the first housing segment, and
3 wherein the back plate includes a first connecting member to engage the first rail, and a
4 second connecting member to engage the second rail.

1 38. The housing assembly of claim 27, wherein the first housing segment includes a top
2 shell, a midframe, and a bottom shell, a first rail formed on a first lateral side of the
3 midframe, a second rail formed on a second lateral side of the midframe, and wherein a back
4 surface of the first housing segment includes a third rail and a fourth rail.

1 39. The housing assembly of claim 38, wherein the second housing segment includes a
2 first bottom housing and a back plate, and wherein the first housing segment includes a top
3 housing and a reduced section, the bottom housing of the second housing segment being
4 moveable over the reduced section of the first housing segment to abut the top housing when
5 the second housing segment is positioned in the contracted position, wherein the back plate is
6 dimensioned to move within the third rail and the fourth rail of the first housing segment to
7 slide along the back surface of the first housing segment, and wherein an interior of the

8 bottom housing includes a first connecting member that is engaged with the first rail
9 provided on the midframe, and a second connecting member that is engaged with the second
10 rail provided on the midframe, the bottom housing .

1 40. The housing assembly of claim 37, wherein the first connecting member and the
2 second connecting member are each biased, wherein the first rail is configured to retain the
3 first connecting member in an unbiased state at a position corresponding to the contracted
4 position and at another position corresponding to the extended position, and wherein the
5 second rail is configured to retain the second connecting member in an unbiased state at a
6 position corresponding to the contracted position and at another position corresponding to the
7 extended position.

1 41. A handheld computer comprising:
2 a first segment providing a first input feature;
3 a second segment slideably coupled to the first segment to move between a contracted
4 position and an extended position, the second segment providing a second input
5 feature, wherein the second segment overlays a portion of the first segment when
6 moved towards the contracted position so as to reduce a length of the handheld
7 computer.

1 42. The handheld computer of claim 41, wherein the first input feature corresponds to a
2 contact-sensitive display.

1 43. The handheld computer of claim 41, wherein the second input feature corresponds to
2 one or more buttons.

1 44. The handheld computer of claim 41, wherein the first segment has a reduced section
2 that has a lesser thickness than a remainder of the first portion, and wherein the second
3 segment slides over the reduced section when moving towards the contracted position.